PUBLIC HEALTH FACT SHEET

Plague

The Disease

Plague is a disease caused by the bacterium *Yersinia pestis.* There are three major forms of plague: bubonic, pneumonic and septicemic.

- Bubonic plague affects the lymph nodes.
- Pneumonic plague affects the lungs.
- Septicemic plague affects the blood.

This handout discusses bubonic and pneumonic plague.

Between five and 15 cases of plague are reported in the U.S. each year. Most cases are bubonic (pronounced boo-bon-ik). These cases are usually scattered and occur in rural and semi-rural areas of the Southwest. Naturally occurring pneumonic plague (pronounced new-mon-ik) is uncommon, although small outbreaks do occur. Both types of plague are readily controlled by standard public health response measures.

The Difference Between Pneumonic and Bubonic Plague

- Pneumonic plague affects the lungs and is passed to other people when an infected person coughs or sneezes.

- Bubonic plague affects the lymph nodes and it is transmitted through the bite of an infected flea, or exposure to infected material through a break in the skin. If bubonic plague is not treated, the bacteria can spread through the bloodstream, infect the lungs, and cause a case of pneumonic plague as well.

Symptoms

Someone exposed to plague bacteria could become ill within one to six days. Patients usually have fever, weakness, headache and rapidly developing pneumonia with shortness of breath, chest pain and cough. Sometimes they cough up bloody or watery mucus. Nausea, vomiting, and abdominal pain may also occur. Without early treatment, pneumonic plague usually leads to respiratory failure, shock and rapid death.

Diagnosis

The first step is evaluation by a healthcare provider. If the healthcare provider suspects pneumonic plague, samples of the patient's blood, mucus from the lungs, or fluid from the lymph nodes are sent to a laboratory for testing.

Treatment

It is important that antibiotics be given immediately, ideally within the first 24 hours of the first sign of symptoms. Immediate treatment is necessary to reduce the risk of dying from plague. Several kinds of antibiotics can cure plague. Some antibiotics come in pill form. Some must be injected or given intravenously.

Reducing the Risk

Plague vaccine is not currently available in the United States. Research is in progress, but we are not likely to have a vaccine for several years.

People having direct and close contact with someone with pneumonic plague should wear tightly fitting disposable surgical masks. Patients with the disease should be isolated for at least the first 72 hours of antibiotic treatment.

People who came in contact with an infected person and were not wearing a surgical mask can be protected from developing plague by receiving prompt antibiotic preventive treatment.

People with symptoms can reduce the chance of spreading plague to others by covering the mouth and nose with a tissue or surgical mask when coughing or sneezing.

People can be exposed to plague through close contact with an infected person. They can also be exposed from bacteria sprayed in the air. If they have **not** shown symptoms, they can greatly reduce the chance of becoming sick if they begin preventive treatment right away. Preventive treatment consists of taking antibiotics for at least seven days. Several types of antibiotics are effective in preventing plague.

Pneumonic Plague and Bioterrorism

According to the Centers for Control Disease and Prevention (CDC), *Y. pestis* could be used as a biological weapon. If *Y. pestis* were released intentionally, it could result in sickness and death.

For More Information Contact

- Your healthcare provider
- Your local department of health
- The New Jersey Dept. of Health and Senior Services
  Communicable Disease Service at (609) 588-7500
- You can also visit the following websites:
  The New Jersey Department of Health and Senior Services website at www.nj.gov/health
  The CDC website at http://www.bt.cdc.gov/agent/plague.